

PATENT
09/718,308
Docket: 093/002AMENDMENTS

Please cancel claims 1-28 in the application as filed without prejudice, and add the following new claims:

29. A cell population that can be cultured *in vitro*, in which at least ~60% of the cells in the population have at least three of the following characteristics:

- antibody-detectable expression of α_1 -antitrypsin (AAT);
- antibody-detectable expression of albumin;
- absence of antibody-detectable expression of α -fetoprotein;
- RT-PCR detectable expression of asialoglycoprotein receptor (ASGR);
- evidence of glycogen storage;
- evidence of cytochrome p450 activity;
- evidence of glucose-6-phosphatase activity; and
- the morphological features of hepatocytes;

wherein the cells with said characteristics are progeny of an established human embryonic stem (hES) cell line.

21
sub B' 30. Two isolated cell populations, which are:

a first cell population that comprises undifferentiated cells from a line of human embryonic stem (hES) cells; and

a second cell population, wherein at least ~60% of the cells in the second population are progeny of said hES cell line, and have at least three of the following characteristics:

- antibody-detectable expression of α_1 -antitrypsin (AAT);
- antibody-detectable expression of albumin;
- absence of antibody-detectable expression of α -fetoprotein;
- RT-PCR detectable expression of asialoglycoprotein receptor (ASGR);
- evidence of glycogen storage;
- evidence of cytochrome p450 activity;
- evidence of glucose-6-phosphatase activity; and
- the morphological features of hepatocytes.

PATENT
09/718,308
Docket: 093/002

- Q1
31. The cell population of claim 29, wherein at least about 60% of the cells have at least five of said characteristics.
 32. The cell population of claim 29, wherein at least about 80% of the cells have at least seven of said characteristics.
 33. The cell population of claim 29, which has been genetically altered to express telomerase at an elevated level.
-

REMARKS

The amendment to the claims is voluntary and made at the option of the assignee as being of commercial interest for immediate patent protection. Applicants intend to pursue coverage for the subject matter previously claimed in one or more separate applications.

Entry of the claim amendments does not introduce new matter into the disclosure. Support for the new claims may be found at various places in the specification, such as the following.

Claims 29 & 30 are supported by Claims 1 & 22 as originally presented; page 16, line 27 to page 17, line 20; page 21, line 13 to page 28, line 22; page 46, line 10 to page 51 (Table 4). It is understood that the scope of Claim 30 includes but is not limited to situations in which the first and the second cell populations are cultured or stored in separate containers. The second cell population is defined according to certain phenotypic characteristics, and the fact that it is progeny of the same stem cell line used to produce the first (undifferentiated) cell population.

Claims 31 & 32 are supported by Claims 2 & 3 as originally presented. Claim 33 is supported by Claim 5 as originally presented.